

LISTING OF THE CLAIMS

1. A method of manufacturing metallic components consisting of at least two different materials, one of them being an iron-based alloy and the other an aluminum-based alloy, comprising the steps of:

depositing a metallic layer onto a body made from the iron-based alloy, said metallic layer being an aluminum-based alloy, preferably based on Al-Si or Fe;

spraying the metallic layer with a single layer of silicon powder whereby the silicon powder adheres to the metallic layer; and `

placing the body in a casting mold and casting an aluminum-based alloy about the body whereby the silicon powder reacts with the aluminum-based alloy cast about the body.

2. The method of claim 1, wherein the particle size of the silicon powder ranges from 200 to 300 μm .

3. The method of claim 2, wherein the body made from the iron-based alloy is a gray cast iron cylinder liner for a piston of an internal combustion engine.

4. A method of manufacturing metallic components consisting of at least two different materials, one of them being an iron-based alloy and the other an aluminum-based alloy, comprising the steps of:

depositing a metallic layer onto a body made from the iron-based alloy, said metallic layer being an aluminum-based alloy, preferably based on Al-Si or Fe;

spraying the metallic layer with Borax; and

placing the body in a casting mold and casting an aluminum-based alloy about the body whereby said borax disrupts the native aluminum oxide and allows for metal to metal contact and alloying between the body and the aluminum-based alloy casting .

5. The method of claim 4 wherein the Borax consists of $\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$.
6. The method of claim 5, wherein the particle size of the Borax ranges from 200 to 300 μm .
7. The method of claim 6, wherein the body made from the iron-based alloy is a gray cast iron cylinder liner for a piston of an internal combustion engine.
8. The method of claim 7 wherein the body made from the iron-based alloy is a part of an internal combustion engine.